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**We need opportunities to bridge the gap between the practical experience of the teacher in the classroom and the linguist's work on the mysteries of language learning.**

# The relationship between linguistics and education

by Robert E. Shafer

Over the years a few linguists have interested themselves in the teaching of reading and writing. Charles C. Fries of the University of Michigan, is perhaps the most well known of these since he wrote books both on the teaching of English and on linguistics and reading.<sup>1,2</sup> Fries was an exception as were Albert Markwardt, Carl LeFevre and Donald Lloyd. Most of the time linguists are at work attempting to be better linguists. They work on various research problems in linguistics, which is the science of the study of language. Most of these research problems have little to do with the immediate day to day concerns of classroom teachers. Some linguists are doing work which directly affects the teaching of reading and writing.

Through the history of linguistics there have been many "false starts" with respect to the application of linguistic insights to the problems of teaching and learning. In most cases, these "false starts" were the fault of educational publishers who attempted to take material from certain aspects of linguistic studies and present it in texts for students. One of the most notorious examples of this is the series of books authored by the late Paul Roberts, a noted linguist who was especially good at translating linguistic studies into texts. Roberts was asked by a major publisher in the 1960s to write a series of textbooks incorporating insights from transformational grammar and other linguistic studies, into texts for language and

writing. A handsome series was produced which was adopted in a number of states. Many teachers are familiar with the difficulty of teaching from this series of books which attempted to teach children various kinds of technical terminology. Some of this terminology came from what was then the new transformational grammar, which was a new development in the early 60s, stemming from the work of Noam Chomsky and developed in his book *Syntactic Structures*.<sup>3</sup> Chomsky was concerned with language learning, but he did not advocate teaching "tree diagrams" or concepts related to "surface structure," "deep structure" and other elements of transformational-generative grammar to children. Such research as we have on the teaching of grammar continues to show that the teaching of grammatical terminology to children does not enhance their fluency in reading and writing.<sup>4</sup> Studying grammar directly is not the way that most adult fluent readers and writers learn to read and write even though many of them think that it is.<sup>5</sup>

Noam Chomsky in his various books, has been concerned with the goals of linguistic science. He proposes that the goal of linguistic science should be to construct a theory of the structure of human language, which will determine its universal and essential properties—in this regard, it is an essential part of science ultimately leading to an understanding of the workings of the human mind.<sup>6</sup> Since the workings of the human mind are a very essential matter to teachers and educators, we need to become informed about Chomsky's proposals as to how language learning takes place.

One of the goals of science is to be able to distinguish the way things are, from the way they appear to be. Such is the case with the science of language and such is the case with the science of learning. Theory is essential to science and lies behind all behavior, including that of the teacher in the classroom. All teaching practices exemplify a theory, whether or not teachers are aware that this is the case. Theories about learning a language are important to education since we do not know how it is that human beings learn a language—only that they do.

What Chomsky gave us, was a very intriguing theory of how language is acquired. Chomsky proposed that in the process of learning language, speakers have acquired a system of rules for relating sound meaning. They use these rules to make their own internal representations of the thoughts of other speakers, from the speech sounds through which such thoughts are expressed.<sup>7</sup> He further proposed that in order to understand another speaker's speech, the speaker must penetrate the phonetic disguise of another's thought, and that penetration is achieved by a system of rules that determines the thought from the phonetic shape. A knowledge of such a system, in the form of a **theory** that formulates these rules, will itself uncover the underlying logical form of the sentence.<sup>8</sup> Chomsky became concerned with the principle that our grammar is a theory about the system of linguistic rules that speakers have internalized in the process of acquiring a language. Post-Chomsky linguists accepted this principle and switched the focus of linguistic investigations away from the observable events of language to the structure of the speaker's internalized linguistic rules. Much of the linguistic world has become concerned with researching the internal reality of language and correspondingly with the principles of child language learning.

One focus of these new linguistic investigations has



been on the speaker's competence or knowledge which extends far beyond the corpus of sentences which any speaker has previously encountered. The concern is how the speaker is able to produce and understand new sentences and moreover ones that bear no direct physical similarity or analogy to those predicted by his past experience. We all know that children quickly acquire the ability to identify, understand and produce sentences that they have never heard before at an early age. Such ability on the part of children makes it necessary to assume that internalized knowledge which affords this predictive ability takes the form of a system of linguistic rules. Linguists have called these rules a grammar.

As linguists have attempted to describe the processes of rule learning in child language they have evoked renewed interest in the processes of learning to read and write. Ken and Yetta Goodman and Frank Smith have developed a psycholinguistic model of the reading process. The psycholinguistic model of reading and writing contrasts with the skills model—the prevailing model on which the publishers base their reading and writing series. Frank Smith has called the skills model the "outside-in model" because it comes from outside of the child and is meant to be internalized by the child in just the way that it is presented in publisher's textbooks. In reading, the skills model supposedly proceeds from sound to letter, from letter to letter combination, from letter combinations to words, from words to sentence and ultimately to meaning. The psycholinguistic model is essentially an "inside-out" model since it proposes that meaning comes first and that the reader is making a "personal construction of the world" as he or she continues to search for meaning and reduce uncertainty. In such a model, the reader or writer acts very much like a linguist, developing hypotheses about the language and proceeding in the same way that the child proceeds as he/she make hypotheses about adult language, digesting language data from adults and proceeding to build on his/her personally constructed child language.

As Courtney Cazden has written in her book, *Child Language and Education*, the child first builds cognitive structure through experience by interaction with the world of language "outside."<sup>10</sup> He/she acquires distinctive features and ultimately the rules for adult grammar. In the psycholinguistic model of reading, the reader proceeds in much the same way and through experience, acquires the distinctive features of print, using cueing systems based on the redundancies in the writing system, the grammar of the language, and his/her semantic system. Both continuously enriching experiences with language and with literature are crucial for building this cognitive structure or prior knowledge, which is so important in developing reading and writing fluency.

The psycholinguistic model of reading has much to say to the classroom teacher. In actuality, many classroom teachers have validated the psycholinguistic model through the years although they have not for the most part been aware of the existence of such a model, but have simply gone on the basis of what seems to work in the classroom for them. The problem is that since we are very much in the pervasive grip of the skills model and of the various reading schemes which support it, it is only the exceptional classroom teacher these days who will try other means. Accountability programs have put a premium on following the teachers' handbook for the reading series or teaching to the test.

The Bullock Report, *Language For Life*, recommends **language experience** as a method of teaching reading and writing and is well known in both the United States and the United Kingdom.<sup>11</sup> Teachers using this method may copy a story which the child composes and use the story as a reading or writing lesson. In later schooling, the child will construct his/her own language experience story and use it as both a reading and writing activity. Such a method is entirely consistent with psycholinguistic theory and research and in fact is is psycholinguistic theory which demonstrates **why** the language experience method has had good results. A companion or related method is the "key word method" developed by Sylvia Ashton Warner explained in her books *Spinster* and *Teacher*. Jeanette Veatch, of Arizona State University, became interested in Warner's work and has used it in her own research in Chandler, Arizona and in American Samoa. Her book, *Key Word Vocabulary*, published by the Charles Merrill Company explains both the method and describes her research.<sup>12</sup> In general, teachers who use this method find words which have particular specialized private and personal meanings to children, and extend these meanings into a larger units of language which they can then treat somewhat as in the language experience method. In the 1950s and '60s Jeanette Veatch and others developed a method of teaching reading called "individualized reading," in her books, *Individualizing Your Reading Program* and *Teaching Reading In The Elementary School*. Veatch proposed that it was possible to teach reading entirely through the use of children's books. She demonstrated clearly that in reading systems or schemes using basal readers, books were not necessary. Research was done in the 1950s on individualizing reading. This research demonstrated that when teachers use the method, children learned to read and develop their reading abilities successfully and also develop a permanent interest in reading.<sup>13</sup>

It is tragic that most teachers who currently come to my classes tell me that they have never heard of language experience or the key word vocabulary method nor have they heard of individually prescribed instruction, which is something quite different altogether.

In the near future perhaps we can look forward to more positive examples of linguistic applications to the teaching of reading and writing than we have had in the past. The new American Association of Applied Linguistics should bring forth good results in these areas. Teachers will need to look beyond the surface at the deeper implications of the work of linguists which will mean that they will need to be much more informed about what linguistic science is all about. We need more opportunities to bridge the gap between the practical experience of the teacher in the classroom and the linguist's work on the mysteries of language learning. As teachers, we must be patient, knowing that research and development come very slowly in these areas where we as yet know so little. We must be continuously suspicious of publishers' materials which offer us "the method of teaching reading and/or writing," and look very carefully at reports such as the Bullock Committee's *Language For Life* which is one of the few sustained investigations of teaching and writing done recently in an English speaking country. It is no accident that *Language for Life* recommends the language experience method and relies heavily on language experience as a basis for improvement in language arts and reading. Teachers need to find out why.



Footnotes

<sup>1</sup>Fries, Charles C. and Fries, Agnes C. **Foundations for English Teaching**, Ken Kyusha, Ltd., Tokyo, 1961.

<sup>2</sup>Fries, Charles C. **Linguistics and Reading**, Holt, Rinehart & Winston, Incorporated, New York, 1962.

<sup>3</sup>Chomsky, Noam, **Syntactic Structures**.

<sup>4</sup>Sherwin, J. Stephen, **Four Problems in Teaching English: A Critique of Research**, pp. 109-167.

<sup>5</sup>*Ibid.*

<sup>6</sup>Chomsky, Noam, **Language and Mind**, Harcourt Brace and World, Inc., N.Y., p. 12.

<sup>7</sup>*Ibid.* p.23

<sup>8</sup>*Ibid.* p. 24

<sup>9</sup>Cazden, Courtney, **Child Language and Education**, Holt, Rinehart and Winston, New York, 1971, p. 112

<sup>10</sup>Department of Education and Science, **Language For Life**, Her Majesty's Stationery Office, London, 1974, p. 37.

<sup>11</sup>Veatch, Jeanette, **Key Word Vocabulary**, Charles Merrill Co., Columbus, Ohio, 1974, *Passim*.

<sup>12</sup>Veatch, Jeanette, **Teaching Reading In The Elementary School**, (2nd ed.) N.Y. John Wiley and Sons, pub. 1978, *Passim*.